Article

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Sinfield, Dean, Allen, J., and Collins, Loel

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A comparative analysis of the coaching skills required by coaches operating in different non-competitive paddlesport settings.

Dean Sinfield [a]*, Justine Allen[b] and Loel Collins [c],.

[a] *Plas y Brenin, National Mountain Sports Centre, Capel Curig, North Wales*

[b] *Faculty of Health Sciences and Sport, University of Stirling*

[c] *Institute of Coaching and Performance, University of Central Lancashire*

*Dean Sinfield, sid.sinfield@pyb.co.uk corresponding author

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This paper examines self-reported behaviours of a group of paddlesport coaches (n= 17). The views of a sample of coaches specialising in non-competitive paddlesports from professional, club and educational contexts are examined, utilising a thematic analysis of semi-structured interviews. The three groups are shown to share common aspects such as the importance of interpersonal skills within their coaching, the development of their coaching skillset via experiential learning and effective reflection and the importance of effective judgment and decision making. However, the groups differ in how they view their coaching role, the role of personal performance skills within their coaching and the impact of formal coach education in their development. The implication for coach education is that coaches working in an educational setting may be better served by a coach educational process that focusses more specifically on their skillset requirements and less on performance development.

Keywords: adventure sports, paddlesports, kayaking, teaching

Introduction

Research in the field of sports coaching and, more specifically, the coaching process (Collins, Abraham, and Collins, 2012; Côté, 2006; Cross, 1995; Cushion, 2007; Franks, Sinclair, Thomson, and Goodman, 1986; Jones, Armour, and Potrac, 2002; Lyle, 1999) has focused predominantly on competitive sports. Recently, research has started to examine coaching practices in non-traditional sports (Wheaton, 2004, 2014), such as nature sports (Krein, 2014; Melo and Gomes, 2017), lifestyle sports (Wheaton, 2004), action sports (Booth, Thorpe, and Thorpe, 2007), extreme sports (Frühauf, Hardy, Pfoestl, Hoellen, and Kopp, 2017; Brymer and Schweitzer, 2017) and adventure sports (Peacock, Brymer, Davids, and Dillon, 2017). Accepting a lack of clarity regarding the exact nature of these sports, some researchers have specifically examined the coaching process within adventure sport (Cooper and Allen, 2017; Berry, Lomax, and Hodgson, 2015; Kearney and Christian, 2015; Pulling, Bunyan, and Sinfield, 2015) with the aim to inform coaching practice and the training of coaches. Cooper and Allen (2017) discussed the skills and behaviours required by the Adventure Sports Coaches (ASCs) and highlighted the process-focused starting point for ASCs. Collins and Collins (2015b, 2016) proposed and identified the roles of an ASC and offered an alternative role-focused starting point.

This paper aims to bridge the positions of Cooper and Allen, (2017) and Collins and Collins (2012) by examining the ASCs' perceptions of (a) their role(s), (b) the skills necessary to fulfil their coaching role and (c) how they developed these skills. This research explores three areas of non-competitive coaching, professional, voluntary and educational, and asks the questions, "What are the key skills expert coaches perceive necessary to fulfil their coaching role in their chosen discipline and setting?" and "How have these coaches acquired and developed these skills?"

Adventure sports

An ongoing and longstanding debate about what is, or isn't, sports coaching has recently begun to include adventure sports. Conceptually, coaches and coaching seem to exhibit some key

features, skills and behaviours that have to be contextualised, suggesting that coaching is domain specific (Cross, 1995; Cushion, 2007; Fairs, 1987; Gilbert and Trudel, 2004; Jones et al., 2002; Lyle, 2002). Lyle and Cushion (2017) highlighted competition as a feature of coaching, competitive adventure sports clearly fall into this view of coaching. Others (Jones, 2006; Werthner and Trudel, 2006; Wikeley and Bullock, 2006) argued that coaching, at its heart, is educating and therefore all coaches are educators, regardless of setting. Our preferred position reflects the later view as these encompass all forms of adventure sports.

We propose that adventure sports take place in natural, unmanaged environments and are not constrained by a set of rules. Adventure sports are commonly associated with risk (Peacock et al., 2017), which has been presented as a continuum (soft–hard), representing degrees of challenge, risk, uncertainty, intensity, duration and perceptions of control (Varley, 2008). Adventure sport participation encompasses a broad range of learning demands; as a commodified perspective, the coach offers enough information for the participant to undertake the activity and achieve what the participant wants from the experience. From an "authentic" perspective (Valkonen, Huilaja, and Koikkalainen, 2013), the learning experience focuses on the development of the technical and cognitive skills needed to undertake the activity independently of the facilitator (Christian, Berry, and Kearney, 2017). Research on ASC (Collins and Collins, 2016) has suggested that whilst there is an overlap of coaching behaviours and skills between all coaches, certain skills (e.g., risk management, personal ability, individualisation) have a higher profile and significance in the adventure sports context.

Role of the Adventure Sports Coach

Collins and Collins (2016) suggested that ASCs operate across three overlapping roles: performance development, personal development and experiential development. In a performance-development role, the coach's focus is on improving sport-specific performance. In the personal-development role, the coach takes a more holistic role, developing knowledge, meta-skills and behaviours; and in the role of experiential development, the coach facilitates an experience or guides within an environment as part of a journey or exploration. The coach moves

between these roles during a session depending on the demands of the environment, the participants and the session objectives. The potential range of objectives and needs of participants subsequently demands an adaptive and flexible approach from ASCs and is an integral aspect of their practice (Cooper and Allen, 2017). However, little is known about the skills coaches employ in non-competitive settings, in particular within adventure sports, and how they were developed. Therefore, the purpose of this study was to examine the perceptions of ASCs from one discipline (paddlesport) who worked in non-competitive settings. The specific purposes were to examine coaches' perceptions of (a) their role(s), (b) the skills necessary to fulfil their coaching role, and (c) how they developed these skills.

Method

A qualitative phenomenological methodology was adopted to enable the breadth and richness of the anticipated responses to be explored (Braun and Clarke, 2006). In this case, the key skills of coaching and their acquisition were considered.

Participants

Participants were British paddlesport coaches (n=17, Mage= 42 years) from three domains of delivery professional coach (n=6 male, Mage= 49 years); voluntary club coach (n=5 male, Mage= 61.2 years); educational coach, (n=6, 4 male, 2 female, Mage= 48 years). To ensure a sufficient level of domain expertise, experience (Mean experience= 22.4 years) and inherent quality in terms of participants' self-reflective ability, purposive sampling was employed based on the criteria outlined in Table 1.

Insert Table 1 close to this point

The coaches were recruited through personal contact with the research team. For clarity and confidentiality, coaches are identified alphanumerically (e.g., professional coaches 1-6; educational coaches1-6; voluntary coaches1-5).

Procedure

A semi-structured interview guide was initially designed and piloted (Willis, DeMatio, and Harris-Kojetin, 1999) with a small representative group (n=4). Minor amendments were made as a result of this process and the guide piloted again prior to data collection. Following participants' consent, the interviews were conducted with each coach at a location and time convenient to them. Table 2 provides the initial questions for the three-part interview.

Insert Table 2 close to this point

Interviews had a mean duration of sixty-seven minutes. Data were digitally recorded in mp3 file format and later transcribed. The first author conducted the interviews and initial analysis of transcripts. This study was carried out with the approval of the university's ethics committee.

Data Processing and Analysis

Following the guidance provided by Braun and Clarke (2006), data were analysed using thematic analysis. Interviews were transcribed verbatim, read, checked and corrected against the recorded interview. Each transcript was actively reread several times prior to fully comprehending the essential features (Sandelowski, 1995) to assist in a complete analysis. General impressions, such as similarities and differences, were written in note form on the transcripts prior to an initial coding and identification of low order themes utilising NVivo 11 for Windows. Data codes were then collated into higher ordered themes based on common features and the relationships between those lower order themes. To avoid researcher bias, once the provisional analysis had been made, a follow-up discussion was had with each of the research participants to check the interpretational accuracy. Importantly, the emergence of themes at any point during the analysis did not depend on the prevalence of a code, but rather on what the theme revealed about the nuances of the coaches' perceptions of their roles. Within a final phase, these themes were subject to review and further refinement with the third author who had not taken parts in stages one, two and three. The principal aim, in this stage, was to check the understanding and interpretation of data and, therefore, the emerging themes throughout the whole dataset.

In addition, the third author independently coded a random sample of the transcripts (50%) to guard against misinterpretation and researcher subjectivity (Morrow, 2005). During this process, data were coded against the emergent themes and assessed for the level of agreement. Any disagreements regarding these differences in allocations of codes into low order themes were discussed until a consensus was reached.

Results

The thematic analysis identified 1,237 raw data codes, which were organized into 47 lower-order themes and 10 higher-order themes. For the purposes of clarity in presenting the findings from the study, the higher themes and their associated lower order themes were organized into 3 categories each relating to one of the three research aims (a) the coaches' role(s), (b) the skills necessary to fulfil the coaching role and (c) how the coaches developed these skills. (Table 3, 4 and 5 respectively). Illustrative quotes have been utilised in table 3 a, b, c and the discussion to demonstrate the depth and richness found within the data.

Discussion of Results

Insert tables 3 close to this point

Description of Role

The participants perceived their role as reflecting the context of their coaching practice, which supports the contentions of Collins and Collins (2015b). Looking within each coaching domain, the coaches demonstrated a clear comprehension of their role and identity (Strets and Burke 2003; McCall and Simmons 1978) and a common practical skill set. Additionally, the coaches did identify role, identity and skill set differences that were specific to each domain. This finding supports Pope, Hall and Tobin (2014) interpretation of McCall and Simmons's (1978) position that 'a conventional dimension exists such that meaning can be shared between individuals acting in the same roles, or they may be idiosyncratic in that a person ascribes a unique meaning to a role that differs from others' (p. 148). This would also support Nash, Spoule and

Horton's (2008) contention that expert coaches show a clear development of their thoughts and depth of understanding of the complex and dynamic role of the coach as it applies to their domain. Along with a clear philosophical identification of their role that underpinned their practice, which was common with and also distinct from their fellow coaches.

The educational coaches clearly perceived themselves as primarily educators. Educational coach 4 stated, 'Just the context of why are we doing this? Especially in my job. Why are we going canoeing? It's not because I'm trying to turn them into canoeists.' In contrast, the professional coaches saw themselves as creating independent performers supporting the contentions of Christian, Berry and Kearney (2017). Professional coach 2 explained this focus, stating, 'Trying to create independence, not consciously pushing it but knowing that's where they are headed'. The educational coaches' educator focus placed an emphasis on developing an independent person, a more holistic approach, rather than an independent canoeist. Consequently, the educational coaches focused on skill development in a quick and functional way, with less concern for technical form, efficiency or retention than the professional coaches. Educational coach 6 explained,

> So, it comes back to your [*educational*] objectives…. I'd say that's the experiential and educational element that they are involved in. I'm not going to teach them much about paddling because we'll only be going over there but they'll never be here amongst these mountains again experiencing this….exactly.

In contrast, voluntary coaches saw their role as developing paddlers and supporting others in their paddling development within the club, which may not lead to a performance that is independent of the club. These coaches recognised that not everyone wanted to be independent of the club, the social aspect being the significant factor In short independence within the club structure .Voluntary coach 3 highlighted the different individual motivations and stated the importance for the individual.

> 'The whole purpose is to give them the opportunity to become an independent paddler. To set their own goals. That's theirs though and not mine. Some don't

want to operate outside the club. They're happy for you to do all the planning and what have you. They just love the social.'

Professional coaches saw their role distinctly as creating independent paddlers, as performers and as learners, able to participate within the sport without the support of a coach or leader. Professional coach 1 stated, 'I see my role as enabling somebody to be independent on the sea.' Professional coach 5 went further, describing the focus of his coaching philosophy and approach: 'Creating self-coaching strategies [for the clients] because courses are short and they will be going away to continue to practice and develop without a coach.'

Collins, Collins and Grecic (2014) suggested that ASCs are engaged in developing independent performers, a position supported by Christian, Berry and Kearney (2017), though this is by no means unique to ASCs. It seems likely that because of the lack of rules and specific performance objectives being set by the athlete, independence may be more central to participation in adventure sports and thus central to its coaching. More fundamentally, the nature of independence is less clear and requires greater investigation. Partial independence within the structure of a course, similar to that encountered by voluntary coaches, within the club, or other sports coaches working within the constraints of competitive rules and regulation, remains a possible objective. The professional coaches described developing independence at the heart of their coaching approach while the voluntary coaches indicated that this was a goal for many but not all their participants. Pragmatically, the educational coaches, could not develop an independent paddler given their shorter contact time with students. Educational coaches viewed independence as an aspect of the longer term broader educative process. The voluntary coaches and professional coaches' context allowed the development of independent canoeing performance. The nature and extent of that independence reflects the motivation of the participants, comprehending the participants' motivations appears to be crucial to providing effective coaching.

Skills for Coaching

Insert tables 4 close to this point

Reflection, judgement and decision making, creativity, flexibility and refined interpersonal skills were common coaching skills identified across all the participants and shared with many views of coaching (Cooper and Allen, 2017; Abraham, Collins and Martindale 2006) Professional coach 2 commented that 'I become more reflective as I've become more experienced,'. This relationship between experience and reflection may be indicative of reflection as an integral aspect of coaching practice in the adventure sport context (Collins and Collins, 2015). For example, Voluntary coach 3 linked reflection to age in relation to his coaching practice,

> I often reflect, as I get older I reflect more …. I've got more time! I think reflection is quite a good tool and it really does let you examine what you're doing and whether it's working or not.

In keeping with many studies (Côté, 2006; Erickson, Côté and Fraser-Thomas, 2007; Schempp and McCullick, 2010), participants valued their own hands-on experience and its associated reflection. Reflection on coaching in a range of contexts is an integral component for all participating coaches in traditional sports. Like other coaches, ASCs engage in reflection in a similar manner to coaches in competitive sports.

The interpersonal skills of coaching, e.g., reading people, developing an effective interpersonal relationship, developing the ability to pitch content effectively, etc., were common and valued factors for the coaches. This finding is consistent with Schempp, Tan and McCullick (2002), who identified 'acute perceptual capacities' (pg. 101) as a key feature of expert teachers. The acquisition of these skills appeared implicit in nature, based on years of experience and emotional intelligence rather than any formal education process.

The coaches reported on a need for agility in their coaching practices in order to respond to the demands of students, the environment and the synergy of the two. The coaches drew on a selection of options in a given context based on a nuanced decision-making process that was driven by a situational awareness (Endsley 1995a) and comprehension of the session demands (Abraham, Collins and Martindale and Collins 2006).

Professional Judgement and Decision Making and Constraints-led Approaches

The coaches in this study placed athlete-focused learning at the centre of the coaching process (Cooper and Allen, 2017. P15). It was athlete-focused, individualised and differentiated approach that was learning centric. This approach was balanced with the demands of other individuals within their coaching group (Kidman, 2005; Kidman, Lombardo, and Jones, 2010; Cooper and Allen, 2017).

Universally, the coaches reported constantly gathering information regarding participants via a process of continual observation and questioning. The coaches constantly watched and audited the environment, the participant and the interaction of the two in order to identify the situational demands that drive the session and tune the coaching process accordingly. These demands drive the coaches' decisions, the selecting and the designing of tasks and the venue.

The demands informed, how the coaches manipulate the constraints (i.e. task, participant or environment), knowledge of the environment, then being in the right place within that environment being key. The coaches described a process resembling the constraints-led model of coaching proposed by Davids, Button, and Bennett (2008) and Brymer and Renshaw, (2010). Crucially, the task, environment and participant constraints were actively manipulated by the coaches, and the relationships made explicit by identifying conceptual links and associations between the task, environment and individual. In doing this, they demonstrated and encouraged a cognitive involvement in the learning process, which appeared at odds with Davids et al.'s (2008) ecological psychology perspective but may reflect the cognitive focus of coach education programmes in paddlesport. This conflation of paradigms is clearly worthy of further investigation.

Role of personal performance skills

A key finding of this study relates to how the coaches viewed the importance of their own personal skills in the craft they were coaching. All groups felt that their personal ability as a canoeist was important and underpinned their coaching activities, reflecting the model put forward by Collins and Collins (2016). This relationship was not, simply to equate, good coaching

and good personal performance. The relationship was more nuanced. The professional coaches and voluntary coaches considered personal ability beyond safety management and technical insight. The coaches linked personal performance with their own confidence and kudos. To 'walk the walk,' (voluntary coach 3) increased respect from their participants. 'I need to be able to perform. It impacts on the coaching…my confidence. There's a direct link for me between personal performance and coaching confidence' (professional coach 6). Such a position may reflect the lack of any clear mental model of technical template for adventure sports performance (Simon, Collins and Collins, 2017). The professional coaches and voluntary coaches use their personal ability as an aid to fully understand aspects of performance and as a diagnostic tool 'I often model their [the students] performance to give me feedback about a performance and help me understand where they are coming from' (professional coach 6). Being active and skilful as a canoeist is an important aspect of being an expert coach in their setting, this differs from competitive sports coaches. Gilbert, Lichtenwaldt, Gilbert, Zelezny and Cote (2009) suggested successful competitive sports coaches are better than the average participants, given the extensive experience they have to draw on, but that they are no longer active in the sport outside of coaching.

The educational coaches saw their personal ability as almost entirely a safeguarding aspect of their role with a high personal skill level as a bonus because it enabled 'fast-tracking' students to the functional performance highlighted earlier. An ability to undertake the educational experience sooner. Effective and safe movement through the environment was seen as important to enable the achievement of the educational objectives of their sessions. 'There's a minimum ability to cover safety to move around adequately other than that I guess I'd just describe it as having a greater toolkit to choose from' (educational coaches 6).

Development of Skills

Insert tables 5 close to this point

Motivation to start paddling

Three common themes emerged across the professional coaches and voluntary coaches groups: (a) a desire for authentic adventure, (b) a desire to be in the outdoors and (c) a lack of interest in traditional competitive sports. Reflecting Krien (2014) and Melo and Gomez (2017), all participants' highlighted interaction with the natural environment as a key attraction of adventure sports: 'the environment was a motivation' (professional coach 1). Professional coach 2 went further and stated, 'I wasn't really interested in traditional sports. I wanted to go exploring.' However, the educational coaches (n=4) started paddling because they wanted to work in outdoor education and saw paddlesports as a vehicle for education.

> And there's the pressure that you are going to be on placement and you are going to be working with these activities. Paddling courses…so you'd better pull yer finger out and learn a bit! (Educational coach 6)

Motivation to start coaching

The voluntary coaches (n= 4) became coaches in response to clubs' needs or evolved from a more general volunteering ethos:

> I'd help out in the summer because they needed coaches on the beach and what have you. And I had the knowledge already through the surfing. And one night somebody asked me if I could give a hand because I was down there anyway… I had to take him (my son) so I was just hanging around at the side of the pool. And after a while, it came time to ask if you wanted to go on a course to take the kids. And I said ok. (Voluntary coach 5)

The voluntary coaches demonstrated a societal aspect of their activity and a broader community responsibility when asked why they coached. This involvement with the club and coaching was altruistic, with the coaches recognizing and valuing their contribution to others' enjoyment of the sport.

> I don't think I've ever felt that because I'm a volunteer that it didn't matter. It's important personally but it's also important because you're representing a structure and a group of people. Because that's what I believe. It's a safety net…. And also people do want to put

> back into the club… I think I've got so much from all the paddlesports. I've done when people ask me to pass on the skills to allow them to go there…if other people get from that what I've got from it then that's motivation enough. (Voluntary coaches 4)

For the educational coaches, the decision to become a teacher often predated the decision to paddle or coach paddlesports. EC4 stated, 'I didn't have a personal desire to get anything more than working qualifications and I'm still the same to this day.'

All the professional coaches started coaching later in their outdoor career and did not identify a career as a coach until they had been working for some time. 'I passed my level 3 and 5* …and realised that if I put some effort in I could make a career of this. Rather than just follow the sun' (professional coaches 2). All started as generic outdoor instructors and held a wide range of qualifications and experiences prior to specialising as an ASC.

Role of coach education

Reflecting the findings of many authors (e.g., Nash, 2008, Nash, Sproule, Callan, McDonald, and Cassidy, 2009) the coaches perceived the impact of coach education as varied. A single educational coach reported coach education helping their development, whereas the voluntary coaches (n=3) reported national governing body (NGB) coach education as helping more significantly.

> I did the coaching [course] and that changed the way I did things. Up to then, I taught almost military…to be fair to [*The NGB coaching development officer]* he again was very helpful in getting our qualifications up to speed and in a very nice way. (Voluntary coach 3)

The professional coaches reported that higher levels of coach education had greater relevance to the more experienced and qualified coach. The professional coaches reported that the education process stimulated thought and raised awareness of theories that had practical application in their roles. Conversely, the professional coaches also reported that at lower levels, the coach education had limited value.

All participants reported that most of their learning was experiential and benefited from regular coaching activity. By implication, reflection on the participants coaching would be important. This echoes findings by Cushion, Armour and Jones (2012), that rather than focusing on technical aspects of coach education early in a career, creating opportunities to actually coach and reflect may be more appropriate. However, in an adventure sports context, a balance would need to be struck to ensure the safety of the students and possibly developing reflective skills by the coach.

Community of Practice

The coaches commented that experiential learning is important and by implication reflection as cited above. Additionally, the coaches reported that being part of a community of practice was significant in developing necessary skills: ‘and of course whilst there, I worked with a lot of freelance staff and so you see good and bad! And the bad was just as informative as the good' (educational coach 2), 'I’m leading a small group of coaches now. It’s useful reflecting time for me' (professional coach 6), voluntary coach 3 referred to his fellow coaches: 'I found sometimes that as I waxed and waned very often the person that I’d taught would be teaching me.' The immediacy of that community and ease of access appeared paramount.

General Discussion

The findings support the model of Collins and Collins (2016), in which ASCs fulfil three overlapping roles: performance development, personal development and experience development, underpinned by an ability to be independent in the environment that was facilitated with a refined judgement and decision-making ability. Within this study, the educational coaches predominantly inhabited the personal development and experiential development roles, moving into performance developments as the educational demands required. Thus, the educational coaches used basic performance development approaches that encouraged rapid skill acquisition enabling participants to access and move through the environment. The needs of the educational coaches differ from those of the professional coaches and voluntary coaches. The educational

coaches require in-depth knowledge and personal skills to get the most from the personal and experiential aspects of their work and meet the educational objectives of the given session. The performance development requirements of their role involve more 'quick fixes' and 'fast-tracking' approaches to skill acquisition at the expense of longer-term development and skill retention. The educational coaches approach differs from that of competition coaches, who are often looking for the most efficient and effective technique (Bartlett, 1992; Hannula, 2003; Koh, 2001) and other 'marginal gains' (Hiley, Wangler, and Predescu, 2009).

Educational coaches may be accurately described as teachers using paddlesports as a medium. Lyle (2002) suggested that 'sports teaching' is a more pertinent description of coaching, where 'no specific preparation for competition is involved' (p. 54). This may seem a more accurate description of the educational coaches in this study. Penney (2006) and Wikeley and Bullock (2006) suggested that defining coaches as engaging in helping their participants to learn more broadly may be more appropriate. The educations coaches needs clearly differed from those of the professional and volunteer coaches in this respect.

Practical hands-on experience and reflection on coaching are key components for all participating coaches, echoing the findings of Côté (2006), Erickson, Côté and Fraser-Thomas (2007) and Schempp and McCullick, (2010). These findings suggest that rather than focusing on technical coach education early in a coach's career, creating opportunities for them to coach would be beneficial prior to technical input (Cushion, Armour, and Jones, 2012). However, development should not be left to experience alone, rather a combination of experience with integrated reflective skills may enable a deeper comprehension of the coaching context and its demands (Cushion et al. 2012). Such an approach, without the implicit preoccupation with technical performance or risk management, could explicitly support the coach as a reflective practitioner. In the case of ASCs, the security of participants would suggest a need to balance this access to coaching with key safety management skills (including personal ability), supervised experiences and critical reflection of coaching in an authentic context (Cushion et al., 2012).

Reflection is seen as a critical feature of coaches' practice and learning (Gallimore, Gilbert, & Nater, 2014) and a feature of coaching effectiveness and coaching expertise (Côté and

Gilbert, 2009). The coaches in the current study clearly saw reflection as a skill integral to what they did and how they developed as coaches. This finding further reinforces the place of reflection in coaching and supports contentions that coach education should seek to use and develop coaches' critical reflection (Cushion, et al., 2012). However, consideration is also needed of what is reinforced rather than challenged as a result of the reflective process (Cushion, 2018). Therefore, researchers should continue to critically examine coaches' processes of reflection, what, who, when, and how it informs coaching practice and learning.

Working alongside and discussing practice with other coaches in a community of practice (Wenger and Snyder, 2000) was seen by all the participants to be essential in their development (Stoszkowski and Collins, 2014). The specific roles of the participating coaches within these communities of practice evolved over time; they became more experienced and established practitioners and central lead figures within their own communities.

Significantly, the voluntary coaches felt that coach education and support from the NGB via development programmes had helped them in their development. The educational coaches and professional coaches cohort felt that formal coach education had played only a small role in their development (see also Cushion, Armour, and Jones, 2012; Nash, Sproule, and Horton, 2017). The educational coaches and professional coaches identified that they became receptive to coach education once they had experience and understood the context and activity of the coach, our earlier observation on experience. Greater facilitation and exploitation of the community of practice and targeted development programmes for the educational coaches and professional coaches would seem to be needed if they are to support coaches operating in these settings. The value of NGB education possibly reflects the voluntary antecedents of NGB training programmes in the UK and an inherent tension with the increased professionalization and commercialisation of adventure sports in the UK (Loynes, 1998).

The identification of a role for the educational coaches in which they are predominantly focussed on the personal and experiential development of their participants differentiates them markedly from the other two groups of coaches in this study. The professional and voluntary coaches' emphasis being on performance development. Traditional forms of coach education with a

performance-focus, input on technique and long-term skill development would appear to serve the latter two groups reasonably well. Not so the educational coaches who may benefit from programmes that help maximise personal development and experiential learning opportunities. Pragmatically, the educational coaches may also benefit more from having a range of potential solutions to facilitate travel through a particular environment. These travelling and leadership skills appear more valuable than technical coaching skills. So what should coach education do? What would it look like? Cushion et al 2012 suggest that coach education is likely to have a low impact on coaching practice and struggle to compete with coaches' experiences as a participant and coach. Therefore, it needs to draw on the coaches' experiences and development of their critical reflection so that they can 'develop themselves' in their contexts. Cushion et al go on to suggest mentoring and reflection in situ. But more it is also about coach education developing critical thinking skills rather than purely sport-specific content.

> "We believe that coach education needs to explore new knowledge and ways of thinking and to be less concerned with guarding old ideas (Schempp, 1993). What we propose is a model of critical thinking that will allow coaches to develop their own processual "expert toolbox" as professionals (Cassidy & Jones, in press) and not follow blindly generic guidelines or mimic the practice of observed others."
>
> (Cushion, 2001 p. 226).

We would concur with these sentiments.

The professional coaches reported independent performance as a primary aim and saw it as an inherent part of AS coaching; reflecting the epistemological positions highlighted by Christian et al (2017) the voluntary coaches reported independence as a goal for many of their paddlers. This was in contrast with the educational coaches. Independence requires participants to be active in the decision-making process, which fundamentally affects the foci and structure of any coaching (Cooper and Allen, 2017).

Limitations and Further Research

The limitations of the qualitative investigation approach, such as limited transferability

and generalisability to other sports are acknowledged. In addition, it is important to recognise the authors' positions and relationship with the participants. Both the first and third authors are paddle-sports coaches of high standing and are known to the participants. This enabled an easy rapport to be established but also had the potential to influence responses and behaviour during the interviews. Both authors have been senior trainer for the NGB, both will have acted as either trainer or assessor to participants during their coaching career given the selection criteria. This potential hierarchical relationship may influence the participant's openness and comfort levels during interviews. As a cross-sectional group educated via the same NGB coach education process, the findings have the potential to reflect characteristics of that particular coach education programme.

Access to suitably qualified voluntary coaches and access to female coaches of suitable qualification and experience across all participants proved equally difficult. The numbers of female coaches who met the criteria is very low. Female coaches only make up 28% of the total British Canoeing Coaching workforce. There are only 11 female level 5 coaches from a cohort of 405. Of these 11 only 5 are still active as coaches. None of these were geographically accessible for this study. This research was conducted in the UK with adventure sports coaches with a paddlesport background, thus was geographically and discipline-specific. Future research should seek to determine more about the roles, skills, and development of women coaches in adventure sports.

If the findings of this research were to be used to inform the educational process of future paddlesports coaches the research would be strengthened if it was extended to other paddlesport coaching domains and disciplines. For example, educationally based coaches working over more extended periods with athletes, coaches of competitive paddlesports disciplines doing so either in a voluntary or professional capacity.

Conclusion

This study reinforces the findings of Collins and Collins (2014, 2015b, 2016) by supporting their description of the differing roles of the ASC and the need for an ability to perform

in the environment. This study has shown the extent of the shared perceptions of the coaches roles and skills and by implication perhaps the developmental needs of coaches working in these varying context within this single adventure sport discipline. The overlapping requirements of performance development for professional coaches and voluntary coaches and holistic focus of the educational coaches are highlighted. The educational coaches were unique in becoming paddlers and coaches with the distinct objective of working in outdoor education and therefore have different educational and development needs to the performance and volunteer coaches. Coach education courses that focus on experience and reflection prior to technical input may change aspects of coach education while building on a practical capacity for the coach to move about the environment in which they coach.

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Table 1

	Professional Coaches (PC)	**Voluntary Club Coaches (VC)**	**Outdoor Educational Coaches (EC)**
Coaching non-competitive paddlesport	Yes	Yes	Yes
Years of experience	Minimum 10 years	Minimum 15 years*	Minimum 10 years
Level of Qualification	Minimum BC Level 5	Minimum BC Level 3	Minimum BC Level 3
Remuneration	Paid	Voluntary	Paid

Operating environment	Up to Advanced	Up to Advanced	Up to Moderate
Autonomy within coaching	Yes	Yes	Yes
Coaching context exclusivity	No	Yes	Yes
identify as canoeist/ kayaker	Yes	Yes	Yes
Willingness to unpack their coaching practice	Yes	Yes	Yes

*Table 1: Criteria for selection of participants, * Note - This level of experience was used rather than 10 years as with the other 2 groups as preliminary work revealed that VC coaches with only 10 year experience were not yet experts.*

1 Table 2

Questions	Prompts	Notes
Section 1 - Personal paddling and coaching background		
If you were to describe your job/role now how would you describe what you do?	• Role frame	• Capture overview of their role as they see it. Impacting factors etc.
How did it all start? Tell me about how you started out in paddling and ended up where you are now?	• Inspired • role models • motivation to paddle initially	• Why did they start paddling? • Overview of their paddling experience. Its depth and breadth • Any key events in this history that made them choose paddling and subsequently coaching as a career pathway.
How/when did you start coaching? **What was you initial motivation to coach?**	• When did you consider coaching to be a career path? • Why do you volunteer?	
Were there any critical experiences or individuals that you feel impacted on your early paddling career? What was this? What was its effect?	• Personal philosophy • Inspiration? • Developing epistemology	• Motivation • early influences on personal philosophy • pivotal incidents that may be expanded on later

		• revisit when exploring coaching philosophy
Section 2 – Self profiling		
What do you feel are the key skills needed to fulfil your role?	• Do you Plan? If so how? • Decision making? How? • Communication? • Interpersonal skills • Role of personal ability within your coaching	• Their perceptions of what key skills and personal attributes they see as essential to fulfil their coaching role as they have described it
What about personal attributes that help this happen?	• Creativity? • Empathy • Motivational? • Confidence?	• How does this compare with Schempp (2010) behaviours?
Where did these develop?	• Self-awareness? • Reflection? • Knowledge development	• Would they describe themselves as reflective practitioners?
Role of coach Education in you development?	• What and how? • If not then where and how?	• Capture their view of formal Coach Education
Any mentors or pivotal individuals?	• Positive or negative? • Why and to what effect?	
Has working with others impacted you development? Is so how?	• Mentors? • Communities of practice?	• Capture view of informal coach development

Section 3 – Personal Coaching Philosophy		
How would you describe you approach to coaching?	• Link with early experience • Link with wider experiences • Epistemological development • Is it always the same or does it differ? • If so how?	• Is there a link back to early experiences?
How does this manifest itself in your sessions?	• Reflective and self-analytical	
Why do you approach your coaching like this?	• Aware of epistemological beliefs?	• Are they consciously aware of their own philosophy? •
Is it always successful?	• Role of reflection in your coaching?	

Table 2. Interview guide

1

Higher Order themes	**Low Order themes**	**Raw data Code**	**Number of respondents**			
Description of Role			PC	EC	VC	Total
Experiential	Journeying	Ocean as a coach PC3	3	3	0	6
	Adventure	They learn from spending time on the ocean PC1	4	3	3	10
	Activity	Making a journey EC2	0	1	0	1
	Experiential learning	Being 'here' and its impact EC5	0	5	0	5
Performance development	Waterman	Respect from other beach users VC3	0	0	1	1
	Skill development	Developing skills to 'do'	4	2	5	11

		something VC4				
	Individualisation	It's all about the individual PC1	6	0	5	11
	Enabling independence	Self-teaching strategies for when I'm not there PC4	6	0	3	9
	Sport specific skills	Giving them the tools to go surfing VC5	5	2	5	12
Personal development	Sharing responsibility	Working together EC6	0	1	0	1
	Challenge	Adventure for the young people EC2	0	1	0	1

	Creating independence	It's where the sport leads PC2	6	1	3	10
	Achieve educational objectives	It's all about the educational objectives EC6	0	6	0	6
	Empowerment	Negotiated goals PC6	2	2	1	5

1 *Table 3: Description of Role*

2

Higher Order themes	**Low Order themes**	**Raw data Codes**	**Number of respondents**			
Skills for Coaching			PC	EC	VC	Total
Structure	Clear objectives	allowing time for considered interactions EC1	0	4	1	5
	High expectation of self and others	I set myself very high standards PC5	6	2	2	10
	Commitment	You feel you ought to VC2	5	0	2	7

Adaptive	Creativity	Coaching is not formulaic PC6	4	3	2	9
	Personal Judgement and Decision Making	Create time to make decisions PC2	6	6	5	17
	Observation and Analysis	Identifying how people what to learn PC 5	6	2	2	10
Interpersonal	Enthusiasm	It has to emanate from you EC1	0	4	2	6
	Honesty	Honesty is an important part of coaching PC 1	2	0	1	3
	Interpersonal skills	Reading and connecting with people PC5	5	6	5	16

Role of personal performance skills	Comfort in the environment to cover safety	Safety is my biggest fear EC4	2	6	0	8
	Extends tool kit of options and venues	Gives me more options EC4	0	6	0	6
	Ability to demonstrate	To show where they're headed PC2	6	0	3	9
	Informs decision making/fast track learning	Helps me to develop a great understanding of their performance PC1	6	6	3	15
	Enhances technical understanding	Modelling their performance PC5	5	0	2	7
	Confidence in coaching	I 'need' to be able to perform PC1	5	0	1	6

	Maintaining passion for the sports	Staying motivated to paddle PC2	2	0	0	2
	Respect from athletes	I can 'walk the walk' VC5	6	0	1	7

1 *Table 4: Skills for Coaching*

2

Higher Order themes	**Low Order themes**	**Raw data Codes**	**Number of respondents**			
Development of Skills			PC	EC	VC	Total
Motivation	Motivation to start paddling	Always like to try something new PC5	3	1	1	5
		Adventure/being in the outdoors EC4	4	4	3	11
		Necessity to work in the outdoor sector EC6	0	4	0	4
		Lack of engagement	4	4	2	10

		with traditional sports PC2				
		Taken by parents/youth group EC6	2	1	1	4
	Motivation to start coaching	Necessity (club needed coaches)	0	0	3	3
		Natural progression of club membership VC5	1	1	1	3
		As a career pathway EC1	4	5	1	10
	Self-motivated to constantly improve	I put a lot of pressure on me to be good PC5	4	1	2	2
Formal/Mediated	Coach education	Not until later did I appreciate it PC1	2	1	3	6
	Mentor	He was a good communicator VC2	2	2	3	7

	Communities of practice	Keeps you striving to get better EC3	5	6	4	15
Reflective practice	Learning through doing	I beat myself up if it does go how I wanted it to. PC5	6	6	5	17
	Reflection	Am I being effective? PC6	6	6	5	17
	Tacit knowledge or personality	I've always been good with people PC3	2	0	0	2

Table 5: Development of coaching skill set